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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,487	10/02/2003	Aaron L. Mills	FGT 1864 PA	2486
28549	7590	12/22/2004	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			NGUYEN, HUNG T	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/605,487

**Applicant(s)**

MILLS ET AL.

**Examiner**

Hung T. Nguyen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/02/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Farmer et al. (6,198,998).

Regarding claim 16, Farmer discloses a method (10) having a single camera (12) for detecting at least two viewing areas in a vehicle [ fig.1, col.3, lines 4-17 and col.4, lines 27-51] comprising:

- the camera (12) for detecting at least two viewing areas / objects in a vehicle [ fig.1, col.3, lines 4-17, lines 53-67 and col.4, lines 27-51];
- a single vision sensor in a form of the camera (12) as monitoring the objects and occupants [col.4, lines 27-51 and col.5, line 66 to col.6, line 12 ];
- a controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 & 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farmer et al. (6,198,998) in view of Gorenflo et al. (U.S. 5,699,448).

Regarding claim 1, Farmer discloses a sensing system (10) having a single camera (12) for detecting at least two viewing areas in a vehicle [ fig.1, col.3, lines 4-17 and col.4, lines 27-51] comprising:

- the camera (12) for detecting at least two viewing areas / objects in a vehicle [ fig.1, col.3, lines 4-17, lines 53-67 and col.4, lines 27-51];
- a single vision sensor in a form of the camera (12) as monitoring the objects and occupants [col.4, lines 27-51 and col.5, line 66 to col.6, line 12 ];
- a controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals [ col.6, lines 23-48 ].

The reference of Farmer does not specifically mention a multipurpose sensing system.

Gorenflo teaches a split field optics for locating multiple components which includes a plurality of fiber optic conduits may be bundle together to provide a single combined image of

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multi components attached to multiple spindles which can be captured by a single camera (316) [ figs.3-4, abstract, col.3, line 62 to col.4, line 17 and lines 39-49 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Gorenflo in the system of Farmer for performing collision warning operations at a plurality of viewing areas to prevent colliding with the other objects in the streets.

Regarding claim 2, Farmer discloses the single vision sensor in a form of the camera (12) as monitoring the objects and occupants [col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ];  
- the controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals [ col.6, lines 23-48 ].

Regarding claim 10, The references of Farmer & Gorenflo do not specifically mention the sensing system can be mounted within an overhead console because those skilled in the art may understand that the sensing system may located in various locations in the vehicle or in various other location known in the art as desired.

Regarding claim 11, Farmer discloses the sensing system (10) having a single camera (12) for detecting at least two viewing areas in a vehicle as collision avoidance control / crash [ fig.1, col.6, lines 24-62 and abstract ].

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Regarding claims 12-13, Farmer discloses the single vision sensor in a form of the camera (12) as monitoring the objects and occupants / child / infant seats [col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ];

- the controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals [ col.6, lines 23-48 ].

5. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farmer et al. (6,198,998) in view of Roberts et al. Publication No. (U.S. 2002/0024713).

Regarding claims 17-18, Farmer discloses the single vision sensor in a form of the camera (12) with lens (16) as monitoring the objects and occupants [col.3, lines 53-67, col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ].

The references of Farmer & Gorenflo do not specifically mention the sensing system includes a second focal point that corresponds to objects external to the vehicle.

Roberts teaches CCD sensors (31,32) or (120) are mounted in a vehicle which may detect outside of the vehicle as the moisture on the windshield [ figs.4,9-10, col.6, paragraph 0065-0066 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Roberts in the system of Farmer for detecting the weather condition from outside of the vehicle and providing a clear view of an environment forward of a vehicle.

Regarding claim 19, The reference of Farmer does not specifically mention the sensing system includes a reflective device.

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Roberts teaches CCD sensors (31,32) or (120) are communicated with a rear mirror assembly (122) are mounted in a vehicle which may indicate data of the vehicle as the vehicle as speed radio station, clock, etc. [ figs.4, 9-10, paragraphs 0009, 0011, 0065-0066 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Roberts in the system of Farmer for more convenient as monitoring the data information of the vehicle on the mirror.

6. Claims 3-9, 14-15 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farmer et al. (6,198,998) in view of Gorenflo et al. (U.S. 5,699,448) further in view of Roberts et al. Publication No. (U.S. 2002/0024713).

Regarding claims 3-5, Farmer discloses the single vision sensor in a form of the camera (12) with lens (16) as monitoring the objects and occupants [col.3, lines 53-67, col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ].

The references of Farmer & Gorenflo do not specifically mention the sensing system includes a second focal point that corresponds to objects external to the vehicle.

Roberts teaches CCD sensors (31,32) or (120) are mounted in a vehicle which may detect outside of the vehicle as the moisture on the windshield [ figs.4,9-10, col.6, paragraph 0065-0066 ].

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Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Roberts in the system of Farmer / Gorenflo for detecting the weather condition from outside of the vehicle and providing a clear view of an environment forward of a vehicle.

Regarding claim 6, Farmer discloses the single vision sensor in a form of the camera (12) with lens (16) as monitoring the objects and occupants [col.3, lines 53-67, col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ].

Regarding claim 7, Roberts teaches photodiode, CCD sensors (31,32) or (120) are mounted in a vehicle which may detect outside of the vehicle as the moisture on the windshield [ figs.4,9-10, col.6, paragraph 0040, 0055 ].

Regarding claims 8-9, Farmer discloses the single vision sensor in a form of the camera (12) as monitoring the objects and occupants [col.4, lines 27-51 and col.5, line 57 to col.6, line 12 ];

- the controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals [ col.6, lines 23-48 ].

Regarding claims 14-15, The references of Farmer & Gorenflo do not specifically mention the sensing system includes a reflective device.

Roberts teaches CCD sensors (31,32) or (120) are communicated with a rear mirror assembly (122) are mounted in a vehicle which may indicate data of the vehicle as the vehicle as speed radio station, clock, etc. [ figs.4, 9-10, paragraphs 0009, 0011, 0065-0066 ].



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Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Roberts in the system of Farmer / Gorenflo for more convenient as monitoring the data information of the vehicle on the mirror.

Regarding claim 20, Farmer discloses a sensing system (10) having a single camera (12) for detecting at least two viewing areas in a vehicle [ fig.1, col.3, lines 4-17 and col.4, lines 27-51] comprising:

- the camera (12) for detecting at least two viewing areas / objects in a vehicle [ fig.1, col.3, lines 4-17, lines 53-67 and col.4, lines 27-51];
- a single vision sensor in a form of the camera (12) as monitoring the objects and occupants [col.4, lines 27-51 and col.5, line 66 to col.6, line 12 ];
- a controller unit (24) is connected to the camera (12) and generating a plurality of safety system signals in response to the plurality of object detection signals [ col.6, lines 23-48 ].

The reference of Farmer does not specifically mention a multipurpose sensing system.

Gorenflo teaches a split field optics for locating multiple components which includes a plurality of fiber optic conduits may be bundle together to provide a single combined image of multi components attached to multiple spindles which can be captured by a single camera (316) [ figs.3-4, abstract, col.3, line 62 to col.4, line 17 and lines 39-49 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Gorenflo in the system of Farmer for performing collision warning operations at a plurality of viewing areas to prevent colliding with the other objects in the streets.

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The references of Farmer & Gorenflo do not specifically mention the sensing system includes a reflective device.

Roberts teaches CCD sensors (31,32) or (120) are communicated with a rear mirror assembly (122) are mounted in a vehicle which may indicate data of the vehicle as the vehicle as speed radio station, clock, etc. [ figs.4, 9-10, paragraphs 0009, 0011, 0065-0066 ].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Roberts in the system of Farmer for more convenient as monitoring the data information of the vehicle on the mirror.

### **Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sala (U.S. 5,642,238) Ergonomically efficient side and rear vision system for motor vehicle.
- Steed et al. (U.S. 6,51,065) Concealed integrated vehicular camera safety system.
- Gal et al. (U.S. 6,411,202) Vehicle sensor apparatus.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (571) 272-2982. The examiner can normally be reached on Monday to Friday from 8:00am to 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffery can be reached on (571) 272-2981. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

A handwritten signature in black ink, appearing to read "Hung T. Nguyen". The signature is written in a cursive, flowing style with a large initial "H" and a long, sweeping underline.

Examiner: Hung T. Nguyen

Date: Dec. 16, 2004